

Attorney Docket No. P13286-US2

AMENDMENTS TO THE CLAIMS

The listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1-3. (Canceled)

4. (Currently Amended) ~~The method according to claim 2, wherein said step of identifying redundant frames comprises the steps of:~~ A method of preprocessing a sequence of video frames, said method comprising the steps of:

receiving the video sequence; and

generating a set of views suitable for algorithmic processing, said generating step including the steps of:

determining a motion estimation between the frames in the video sequence; and

identifying a frame as redundant if the motion estimation yields a final correlation coefficient above a predetermined threshold; and

deleting any frames that are identified as redundant.

5. (Original) The method according to claim 4, wherein the motion estimation is a global motion estimation.

6. (Original) The method according to claim 4, wherein the motion estimation is a local motion estimation.

7. (Currently Amended) The method according to claim ~~[[1]]~~ 4 further comprising the steps of:

determining shot boundaries of the video sequence;

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dividing the video sequence into at least one subsequence of frames, wherein each of the at least one subsequence of frames corresponds to a particular shot in the video sequence;

identifying redundant frames in the at least one subsequence of frames; and

deleting from the at least one subsequence of frames any frames which are identified as redundant.

8. (Original) The method according to claim 7, wherein the shot boundaries are provided by the camera which captured the video sequence.

9. (Original) The method according to claim 7, wherein the step of determining the shot boundaries comprises the steps of:

correlating adjacent frames in the video sequence after global motion compensation; and

identifying, for each pair of adjacent frames, the second frame in the pair as a beginning of a new shot based on the correlation between the frames in the pair.

10. (Currently Amended) The method according to claim ~~[[1]]~~ 4, wherein the video sequence is received from a video capture device in real-time.

11-12. (Canceled)

13. (Currently Amended) ~~The method according to claim 12, wherein the step of determining whether or not the frame is redundant comprises the steps of:~~ A method of capturing a video sequence comprising the steps of:

receiving video from a video capture device as a sequence of frames;

for each frame in the sequence:

calculating a motion estimation between the frame and a previously accepted frame; and

identifying the frame as redundant if the motion estimation yields a final correlation coefficient above a predetermined threshold;

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accepting frames that are determined not to be redundant; and
storing the accepted frames in a storage device.

14. (Currently Amended) ~~The method according to claim 12, wherein the step of determining whether or not the frame is redundant comprises the steps of:~~ A method of capturing a video sequence comprising the steps of:

receiving video from a video capture device as a sequence of frames;
for each frame in the sequence:

calculating a motion estimation between the frame and all the previously accepted frames; and

identifying the frame as redundant if the motion estimation yields a final correlation coefficient above a predetermined threshold;

accepting frames that are determined not to be redundant; and
storing the accepted frames in a storage device.

15. (Currently Amended) The method according to claim ~~[[11]]~~ 13, further comprising the steps of:

monitoring the rate at which accepted frames are provided to the storage device;
and

providing an indication to the user of the video capture device to decrease the motion of the camera, if the storage device is unable to process the accepted frames at the current rate.

16-19. (Canceled)

20. (Currently Amended) A system for preprocessing a video sequence to produce a set of views suitable for Structure from Motion processing, said system comprising:

a source for a sequence of video ~~sequence source~~ frames;
a storage medium; and

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a preprocessor, wherein the preprocessor is configured to ~~perform frame decimation~~ generate a set of views suitable for Structure from Motion processing by determining a motion estimation between the frames in the video sequence, identifying a frame as redundant if the motion estimation yields a final correlation coefficient above a predetermined threshold, and deleting any frames that are identified as redundant.

21. (Currently Amended) The system of claim 20, wherein the preprocessor ~~comprises~~ includes a data buffer for receiving the video ~~sequences~~ sequence.

22. (Original) The system of claim 21, wherein the video sequence source is a video capture device.

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23. (Original) The system of claim 21, wherein the video sequence source is a memory device.

24. (Original) The system of claim 20, wherein the storage device is a flash memory device.

25-27. (Canceled)

28. (Currently Amended) The system of claim 22, wherein the video sequence is received as a sequence of frames from ~~[[a]]~~ the video capture device in real-time.

29. (New) A preprocessor for preprocessing a received sequence of video frames and storing a decimated subset of frames suitable for Structure from Motion processing, said preprocessor comprising:

means for determining a motion estimation between the frames in the video sequence;

means for identifying a frame as redundant if the motion estimation yields a final correlation coefficient above a predetermined threshold; and

means for deleting any frames that are identified as redundant.

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30. (New) A method of preprocessing a sequence of video frames, said method comprising the steps of:

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- (a) receiving the video sequence in a preprocessor;
 - (b) sequentially analyzing each frame in the sequence to determine whether each frame differs from the previous adjacent frame by a difference that exceeds a predetermined threshold amount;
 - (c) storing each analyzed frame that differs from the previous adjacent frame by a difference that exceeds the predetermined threshold amount;
 - (d) deleting any frames that differ from the previous adjacent frame by an amount less than the predetermined threshold amount until a calculated total difference exceeds the predetermined threshold amount, said calculated total difference being the sum of the differences between each deleted frame and the deleted frame's previous adjacent frame;
 - (e) storing the analyzed frame for which the total difference exceeds the predetermined threshold amount; and
 - (f) repeating steps (b) through (e) until the entire video sequence has been analyzed, and a decimated subset of frames has been stored.

31. (New) A preprocessor for preprocessing a received sequence of video frames and storing a decimated subset of frames suitable for Structure from Motion processing, said preprocessor being configured to:

- (a) sequentially analyze each frame in the sequence to determine whether each frame differs from the previous adjacent frame by a difference that exceeds a predetermined threshold amount;
- (b) store each analyzed frame that differs from the previous adjacent frame by a difference that exceeds the predetermined threshold amount;
- (c) delete any frames that differ from the previous adjacent frame by an amount less than the predetermined threshold amount until a calculated total difference exceeds the predetermined threshold amount, said calculated total difference being the sum of the differences between each deleted frame and the deleted frame's previous adjacent frame;

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(d) store the analyzed frame for which the total difference exceeds the predetermined threshold amount; and

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come (e) repeating steps (a) through (d) until the entire video sequence has been analyzed, and a decimated subset of frames has been stored.
